UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
KIM, PAUL

ART UNIT	PAPER NUMBER
2161	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

	Application No.	Applicant(s)
Office Action Summary	10/808,099	ERLINGSSON, ULFAR
	Examiner	Art Unit	
	Paul Kim	2161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>15 January 2007</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8, 15-23 and 30* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8, 15-23 and 30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date *4/12/04, 9/21/06*.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   This Office action is responsive to the following communication: Amendment filed on 15

January 2007.

2.   Claims 1-8, 15-23, and 30 are pending and present for examination. Claims 1 and 16 are

independent.

Election/Restrictions

3.   Applicant's election with traverse of the Election of Species in the reply filed on 15

January 2007 is acknowledged. The traversal is on the ground(s) that it is not a burden to

examine all species claims of Invention I since there are 10 claims which are common to all three

species. This is not found persuasive because though 10 claims may be common to all three

species, the claimed invention is directed to three differing species and embodiments.

The requirement is still deemed proper and is therefore made FINAL.

Information Disclosure Statement

4.   The information disclosure statements (IDS) submitted on 12 April 2004 and 21

September 2006 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the

information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 112

5.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process
> of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in
> the art to which it pertains, or with which it is most nearly connected, to make and use the same and
> shall set forth the best mode contemplated by the inventor of carrying out his invention.

6.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

7.   **Claims 6-7 and 21-22** are rejected under 35 U.S.C. 112, first paragraph, as failing to

comply with the enablement requirement. The claim(s) contains subject matter which was not

described in the specification in such a way as to enable one skilled in the art to which it

pertains, or with which it is most nearly connected, to make and/or use the invention. Claims 6

and 7 recite the following limitations respectively: "requires the application to quit in order to

save the working file" and "the application is of the type that must quit before the working file

can be saved." The disclosure by Applicant's Specification fails to particularly describe how an

application can save when the application has already quit, or effectively terminated. It is

unclear from Applicant's Specification how data to be saved into a working file is extracted from

an application which has already quit.

8.   **Claims 6-7 and 21-22** are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention. Applicant has failed to particularly point out and distinctly

claim how an application is required to quit before the working file is saved. That is, Applicant

has failed to recite method steps pertaining to receiving data to be saved into a working file

when the application has already quit. Furthermore, it is unclear and indefinite as to whether the

invention requires the application to quit in order to save.

        Accordingly, for the reasons stated above in relation to the rejection of the present

claims under 35 U.S.C. 112, prior art will not be applied in this examination.

Claim Rejections - 35 USC § 101

9.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

10.   **Claims 6-7** are rejected under 35 U.S.C. 101 because the disclosed invention is

inoperative and therefore lacks utility. Claims 6 and 7 recite the following limitations

respectively: "requires the application to quit in order to save the working file" and "the

application is of the type that must quit before the working file can be saved." Therefore, the

recitations of claims 6 and 7 require that the application quit in order for the working file to be

saved. However, where the application has already quit and terminated, the working file could

no longer be saved since the data pertaining to the save process is no longer available from the

application. Therefore, by necessitating that the application quit before data may be saved to

the working file, the invention is inoperative since no data would be available after the

application has already quit.

Claim Rejections - 35 USC § 102

11.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless —
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in
> public use or on sale in this country, more than one year prior to the date of application for patent in
> the United States.

12.   **Claims 1-5, 15-20 and 30** are rejected under 35 U.S.C. 102(b) as being anticipated by

Bradshaw et al (U.S. Patent No. 6,480,944, hereinafter referred to as Bradshaw), filed on 2

March 1998, and issued on 30 January 2001.

13.   **As per independent claim 1 and 16,** Bradshaw teaches:

> A method of recovering an application using a timeline-based computing
> environment, the method comprising the steps of:
>
> > periodically saving data items of the application for recovery, wherein the
> > saved data items allow the recovery of the application at a point in time
> > when the items were saved {See Bradshaw, C3:L28-36, wherein this reads over "in-
> > progress data may be retrieved and stored to preserve the changes. This could occur in
> > parallel with normal process operations, such as conventional periodic retrieval that occurs
> > automatically over certain time periods"};
> >
> > searching a time-based archive of the saved data items {See Bradshaw, C16:L1-
> > 22, wherein this reads over "searching out for certain flags that identify such a file, or by
> > other means that might identify such a file in the system"};

designating a point in time from which to recover the application {See Bradshaw, C16:L1-22, wherein this reads over "where cachecache data is retrieved from such a file or data location"}; and

recovering the application using the data items saved at the designated point in time {See Bradshaw, C16:L1-22, wherein this reads over "[r]estoration may then be performed in step 1114, where the content or file attributes are restored"}.

14.   **As per dependent claims 2 and 17,** Bradshaw teaches:

The method according to claim 1 further comprising the step of saving contextual information relevant to the point in time when the data items are saved {See Bradshaw, C5:L48-62, wherein this reads over "[t]he attributes of a file . . . include information relating to the file. This may include, for example, the size of the file contents, a time stamp indicating when the file was created or when the file contents were last changed"}.

15.   **As per dependent claims 3 and 18,** Bradshaw teaches:

The method according to claim 1 further comprising the step of generating a fork of the recovered application at the designated point for usage {See Bradshaw, C6:L1-17, wherein this reads over "[w]hen a change is made to the file contents, both the changed version of the file contents and the version prior to the changes may be stored in the backing store"}.

16.   **As per dependent claims 4 and 19,** Bradshaw teaches:

The method according to claim 3 wherein the generated fork is an alternative timeline reflecting new usage of the recovered application {See Bradshaw, C6:L28-31, wherein this reads over "[a] pointer may be provided such as in the backing store, which links both the newly changed attributes and the prior attributes to the same copy of the associated file contents"}.

17.   **As per dependent claims 5 and 20,** Bradshaw teaches:

The method according to claim 1 wherein the saving step further comprises the steps of:

determining whether the application is of a type that can save a working file without quitting the application {See Bradshaw, C4:L14-18, wherein this reads over "[t]he retrieval and storage of the data may also be automatic, making the operations operate in the background of an application, transparent to the system operators"; and};

observing the application for any working file that is being saved by the application when the application is of the type that can save the working file without quitting the application {See Bradshaw, C10:L22-30, wherein this reads over "storing in-progress changes of different versions of content automatically and in synchronously with the development and maintenance application"}; and

capturing the saved working file {See Bradshaw, C10:L22-30, wherein this reads over "storing in-progress changes of different versions of content automatically and in synchronously with the development and maintenance application"}.

18.   **As per dependent claims 15 and 30,** Bradshaw teaches:

The method according to claim 1 further comprising the steps of:

> copying data from the application recovered at the designated point in time
> {See Bradshaw, C8:L51-65, wherein this reads over "the contents of an edition may be
> virtually copied into a work area to be used as a basis for further development of the
> website"};

> returning to a current point in time[1]; and

> pasting the copied data in the application in the current point in time {See
> Bradshaw, C9:L51-65, wherein this reads over "developers may instantly recall files, entire
> directories or reconstruct entire past versions of the website. For example, the contents of
> an edition may be virtually copied into a work area to be used as a basis for further
> development of the website"}.

Claim Rejections - 35 USC § 103

19.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented
> and the prior art are such that the subject matter as a whole would have been obvious at the time
> the invention was made to a person having ordinary skill in the art to which said subject matter
> pertains. Patentability shall not be negatived by the manner in which the invention was made.

20.   **Claims 8 and 23** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Bradshaw, in view of Rodriguez et al (U.S. Patent No. 6,725,241, hereinafter referred to as

Rodriguez), filed on 31 March 1999, and issued on 20 April 2004, and in further view of van

Reitschote (U.S. Patent No. 7,093,086), filed on 28 March 2002, and issued on 15 August 2006.

21.   **As per dependent claims 8 and 23,** Bradshaw, as modified by Rodriguez and van

Reitschote, would disclose:

The method according to claim 1 wherein the saving step further comprises the
steps of:

> determining whether there is sufficient space to capture a machine state
> {Rodriguez, C3:L53-57, wherein this reads over "[i]f all of the memory is used and the
> garbage collector is unable to reclaim memory or if the memory is below or reaches a pre-
> defined threshold, the process of the present invention is initiated"};

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[1] The Examiner notes that the method step of "returning to a current point in time" is inherent to
the claimed invention in that in order to restore an application using the data recovered from a
past designated point in time, the method must paste, in the current point in time, said data
recovered from a past designated point in time.

      running a virtual machine when there is sufficient space to capture the machine state {See van Reitschote, C2:L53-62, wherein this reads over "[a] computer system executes one or more virtual machines, each of which may include one or more applications"};

      executing the application in the virtual machine {See van Reitschote, C2:L53-62, wherein this reads over "[a] computer system executes one or more virtual machines, each of which may include one or more applications"}; and

      capturing the state of the virtual machine at the point in time {See van Reitschote, C2:L53-62, wherein this reads over "the computer system may capture a state of each virtual machine and backup the state"}.

While Bradshaw fails to expressly disclose the limitations of the aforementioned method steps of the present claim, Rodriguez discloses a method of free memory in a data processing statement, wherein a Java virtual machine is depicted in accordance with the preferred embodiment. Additionally, van Reitschote discloses a method wherein the computer system which is executing one or more virtual machines is able to capture a state of each virtual machine and backup the state. The modification of the invention disclosed in Bradshaw by the inventions disclosed in Rodriguez and van Reitschote would disclose a method wherein the saving step would further comprise the determination of whether there was sufficient memory to capture a virtual machine state, and capturing said virtual machine state upon execution of the application. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above invention as suggested by Bradsahw with the inventions disclosed by Rodriguez and van Reitschote.

One of ordinary skill in the art would have been motivated to do this modification so as to verify the availability of sufficient memory before a state of the virtual machine is captured.

Conclusion

22.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Kim whose telephone number is (571) 272-2737. The examiner can normally be reached on M-F, 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Apu Mofiz can be reached on (571) 272-4080. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR system,

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like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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